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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/634,825	08/06/2003	Akira Nagashima	03500 016040.1	7347	
5514	7590 04/04/2006		EXAM	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			SHAH, M.	SHAH, MANISH S	
30 ROCKEFELLER PLAZA NEW YORK, NY 10112		ART UNIT	PAPER NUMBER		
	,		2853	•	
			DATE MAILED: 04/04/2000	5	

Please find below and/or attached an Office communication concerning this application or proceeding.

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		Application No.	Applicant(s)			
Office Action Summary		10/634,825	NAGASHIMA ET AL.			
		Examiner	Art Unit			
		Manish S. Shah	2853			
Period fo	The MAILING DATE of this communication app r Reply	ears on the cover sheet with the c	orrespondence address			
WHIC - Exten after 5 - If NO - Failur Any re	DRTENED STATUTORY PERIOD FOR REPLY HEVER IS LONGER, FROM THE MAILING DASSIONS of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. Period for reply is specified above, the maximum statutory period we to reply within the set or extended period for reply will, by statute, apply received by the Office later than three months after the mailing of patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION  16(a). In no event, however, may a reply be tim  fill apply and will expire SIX (6) MONTHS from a  cause the application to become ABANDONED	l. ely filed the mailing date of this communication. O (35 U.S.C. § 133).			
Status						
1)⊠	Responsive to communication(s) filed on 21 Fe	ebruary 2006.				
2a)⊠	This action is FINAL. 2b) ☐ This action is non-final.					
3)	3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.					
Dispositi	on of Claims					
5)□ 6)⊠ 7)□	4)  Claim(s) 1,4-18,20-22 and 25-53 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5)  Claim(s) is/are allowed.  6)  Claim(s) 1,4-18,20-22 and 25-53 is/are rejected.  7)  Claim(s) is/are objected to.  8)  Claim(s) are subject to restriction and/or election requirement.					
Applicati	on Papers					
10)	The specification is objected to by the Examine The drawing(s) filed on is/are: a) accomplicant may not request that any objection to the Replacement drawing sheet(s) including the correct The oath or declaration is objected to by the Example 2.	epted or b) objected to by the bed on the bed on by the bed on the	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).			
Priority u	ınder 35 U.S.C. § 119					
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>						
2) Notic 3) Inform	t(s) e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) r No(s)/Mail Date	4)  Interview Summary Paper No(s)/Mail Da 5)  Notice of Informal F 6)  Other:				

### **DETAILED ACTION**

## **Double Patenting**

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1, 38 & 50 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,676,254 B2 in view of Shimada et al. (# US 6302530).

Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is disclosed in the US Patent and is covered by the US Patent, since the US patent and the application are claiming common subject matter, as follows as shown in Table: 1 below.

## TABLE: 1

#### # US 6676254 B2 CLAIMS

- 1. A recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member, wherein the ink comprises
  - (i) a fluorescent coloring material;
  - (ii) a nonionic surfactant;
- (iii) a compound which is not compatible with (ii) and; which has a solubility parameter of not less than 15; and
- (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and

wherein the ink contact member comprises at least one compound selected from the group consisting of polyacetate and polyolefin.

#### # 10/634,825 CLAIMS

- 1. A recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member, wherein the ink comprises
  - (i) a fluorescent coloring material;
  - (ii) a nonionic surfactant;
  - (iii) a compound which is not compatible with (ii);
- (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and

wherein the ink contact member is an ink-holding member made of polypropylene.

- 38. An ink cartridge comprising an aqueous ink and ink contact member, wherein the ink comprises
  - (i) a fluorescent coloring material;
  - (ii) a nonionic surfactant;
- (iii) a compound which is not compatible with (ii); and
- (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and

wherein the ink contact member is an ink-holding member made of polypropylene.

- 50. An ink tank comprising an aqueous ink, an ink container and ink holding member, wherein the ink comprises
  - (i) a fluorescent coloring material;
  - (ii) a nonionic surfactant;
- (iii) a compound which is not compatible with (ii); and
- (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and

wherein the ink contact member is an inkholding member made of polypropylene.

With respect to claim 1, the pending application claiming the recording method steps, which is almost same as of US patent.

However, the pending application claimed a compound, which is not compatible with (ii), which is broader limitation than the US Patent, so this limitation still can read by the US Patent claim.

It was obvious to one of ordinary skill in the art at the time of invention was made to use the ink composition of the US Patent in to the recording method of pending application to get the printed image.

With respect to claims 1, 38 & 50 the pending application claiming (1) the ink cartridge including the ink composition, (2) The ink holding member includes polypropylene.

Shimada et al. teaches that to store the ink, recording apparatus need ink cartridge (ink holding member), wherein ink-holding member is made of polypropylene (column: 8, line: 25-45), which has a low permeability to vapor, and because of that ink can maintain their quality for an extended period of time.

It was obvious to one of ordinary skill in the art at the time of invention was made to use the ink composition taught in the US Patent in to the ink cartridge of Omata et al. to get the low coast ink cartridge, and because of the low permeability to vapor, the ink can maintain their quality for an extended period of time (column: 8, line: 40-45).

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3. Claim 1, 38 & 50 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,676,254 B2 in view of Omata et al. (# US 5953031).

Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is disclosed in the US Patent and is covered by the US Patent, since the US patent and the application are claiming common subject matter, as follows as shown in Table: 1 below.

## TABLE: 1

#### # US 6676254 B2 CLAIMS

- 1. A recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member, wherein the ink comprises
  - (i) a fluorescent coloring material;
  - (ii) a nonionic surfactant;
- (iii) a compound which is not compatible with (ii) and; which has a solubility parameter of not less than 15; and
- (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and

wherein the ink contact member comprises at least one compound selected from the group consisting of polyacetate and polyolefin.

#### # 10/634,825 CLAIMS

- 1. A recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member, wherein the ink comprises
  - (i) a fluorescent coloring material;
  - (ii) a nonionic surfactant;
- (iii) a compound which is not compatible with (ii); and
- (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and

wherein the ink contact member is an ink-holding member made of polypropylene.

- 38. An ink cartridge comprising an aqueous ink and ink contact member, wherein the ink comprises
  - (i) a fluorescent coloring material;
  - (ii) a nonionic surfactant;
- (iii) a compound which is not compatible with (ii); and
- (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and  $\;$

wherein the ink contact member is an ink-holding member made of polypropylene.

- 50. An ink tank comprising an aqueous ink, an ink container and ink holding member, wherein the ink comprises
  - (i) a fluorescent coloring material;
  - (ii) a nonionic surfactant;
- (iii) a compound which is not compatible with (ii); and
- (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and

wherein the ink contact member is an ink-holding member made of polypropylene.

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However, the pending application claimed a compound, which is not compatible with (ii), which is broader limitation than the US Patent, so this limitation still can read by the US Patent claim.

It was obvious to one of ordinary skill in the art at the time of invention was made to use the ink composition of the US Patent in to the recording method of pending application to get the printed image.

With respect to claims 1, 38 & 50 the pending application claiming (1) the ink cartridge including the ink composition, (2) The ink holding member includes polypropylene.

Omata et al. teaches that to store the ink, recording apparatus need ink cartridge (ink holding member), wherein ink-holding member is made of polypropylene (column: 6, line: 50-62).

It was obvious to one of ordinary skill in the art at the time of invention was made to use the ink composition taught in the US Patent in to the ink cartridge of Omata et al. to get the low coast ink cartridge, and because of the high transparency of the polypropylene, the users to visually check an ink remaining amount for convenience of use (column: 6, line: 50-62).

# Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claims 1, 4-18, 20-22, 25-37 & 51 are rejected under 35 U.S.C. 103(a) as being obvious over Nagashima et al (# US 6676734) in view of Shimada et al. (# US 6302530).

The applied reference has a common Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Nagashima et al. discloses a recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member (column: 38, line: 49-68; column: 39, line: 1-36), wherein the ink comprises (i) a fluorescent coloring material, which is an azo dye (column: 11, line: 1-25) and the ink contains ammonium ions and alkali metal ions, and at least one selected from urea and derivatives thereof, which includes alkyl derivatives of urea and ethylene oxide adducts of urea and propylene oxide adducts of urea; and the surface tension of the ink is not more than 40mN/m (dyne/cm) (column: 26, line: 10-25) and pH is not more than 8; (ii) a nonionic surfactant; (iii) a compound which is not compatible with (ii) and has the solubility parameter not less than 15 (column: 8, line: 25-35), which is selected from ethylene oxide, sugar alcohol (column: 8, line; 40-50); and (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii) (see Abstract; column: 2, line; 50-65), and wherein the ink contact member in the ink holding member made of polymer formed by condensation or polymerization reaction of organic compounds (column: 29, line: 20-30). They also disclose that the contact member is an ink-container with an ink holding member (figure: 1-3). They also discloses the step includes the sub-steps of: ejecting ink droplets from an orifice in response to recording signals with ink-jet method, and conducting recording on the recording medium (column: 38, line: 49-68), which is performed by applying thermal energy to the ink (column: 27, line: 30-35). They also disclose that the fluorescent coloring material is water-soluble or hydrophilic (column:

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11, line: 1-7), wherein the concentration of the fluorescent coloring material in the ink is equal to or exceeds the concentration thereof exhibiting the maximum fluorescence intensity, and wherein the concentration of the fluorescent coloring material in the ink is not more than 1.5% by mass based on total mass of the ink (column: 14, line: 55-65), wherein the fluorescent coloring material is a fluorescent dye (column: 11, line: 5-23). They also discloses that the nonionic surfactant is a liquid at room temperature and has an HLB of not more than 13 (column: 9, line: 11-20) and the concentration of the nonionic surfactant in the ink is a value causing no phase separation in the ink and the concentration of the nonionic surfactant in the ink is that does not cause phase separation of the nonionic surfactant even when the ink does not contain the fluorescent coloring material, wherein the concentration of the nonionic surfactant is contained in an amount not more than 1.0% by mass based on total weight of the ink (column: 9, line: 25-50). They also disclose that the nonionic surfactant has a structure represented by the following formula (column: 9, line: 50-65). They also disclose that the fluorescent coloring material is C.I. Acid Red 52, and the content of the coloring material is at most 0.4% by weight based on total weight of ink (see Table: 1-1).

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$$A-C-C \equiv C-C-B$$

$$X$$

$$Y$$

$$OH$$

$$OH$$

$$CH_3$$

$$Y$$

$$Y$$

$$Y$$

$$Y$$

$$Y$$

(wherein A and B are independently CnH2n+1 (n being an integer of 1 to 10), and X and Y are independently a ring-opened ethylene oxide unit and/or a ring-opened propylene oxide unit.)

Nagashima et al. differs from the claim of the present invention is that the ink holding member comprises the polypropylene.

Shimada et al. teaches that to store the ink, recording apparatus need ink cartridge (ink holding member), wherein ink-holding member is made of polypropylene (column: 8, line: 25-45), which has a low permeability to vapor, and because of that ink can maintain their quality for an extended period of time.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink holding member of Nagashima et al. by the aforementioned teaching of Shimada et al. in order to get the low coast ink cartridge, and because of the low permeability to vapor, the ink can maintain their quality for an extended period of time (column: 8, line: 40-45).

5. Claims 38-50 & 52-53 are rejected under 35 U.S.C. 103(a) as being obvious over Nagashima et al (# US 6676734) in view of Shimada et al. (# US 6302530).

The applied reference has a common Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Nagashima et al. discloses an inkjet recording apparatus including an ink cartridge including an aqueous ink and ink contact member (figure: 4, 13 & 28; column: 38. line: 49-68; column: 39, line: 1-36), wherein the ink includes (i) a fluorescent coloring material, which is an azo dye (column: 11, line: 1-25) (ii) a nonionic surfactant; (iii) a compound which is not compatible with (ii) and has the solubility parameter not less than 15 (column: 8, line: 25-35), which is selected from ethylene oxide, sugar alcohol

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(column: 8, line: 40-50); and (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii) (see Abstract; column: 2, line: 50-65), and wherein the ink contact member in holding member made of polypropylene (polymer formed by condensation or polymerization reaction of organic compounds) (column: 29, line: 20-30). They also disclose that the contact member is an ink-container with an ink-holding member (figure: 1-3), wherein ink-holding member is porous, contact with the ink container, with multi layer structure (figure: 5-6, 13). They also disclose that the fluorescent coloring material is C.I. Acid Red 52, and the content of the coloring material is at most 0.4% by weight based on total weight of ink (see Table: 1-1).

Nagashima et al. differs from the claim of the present invention is that the ink holding member comprises the polypropylene.

Shimada et al. teaches that to store the ink, recording apparatus need ink cartridge (ink holding member), wherein ink-holding member is made of polypropylene (column: 8, line: 25-45), which has a low permeability to vapor, and because of that ink can maintain their quality for an extended period of time.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink holding member of Nagashima et al. by the aforementioned teaching of Shimada et al. in order to get the low coast ink cartridge, and because of the low permeability to vapor, the ink can maintain their quality for an extended period of time (column: 8, line: 40-45).

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# Response to Arguments

6. Applicant's arguments filed 02/21/2006 have been fully considered but they are not persuasive.

- 7. With respect to claim rejection of Nagashima et al. (254) in view of Omata et al. Applicant argued that the Omata et al. reference and Nagashima et al. reference did not suggest or teach that the ink holding member comprises polypropylene, which is not persuasive. Omata et al. clearly teaches in column: 6, line: 52-61 that "Furthermore, because of small welding area described above, a material, such as polypropylene (P.P.), polybutylene-telephthanol (P.B.T.) or the like, which has high gas barrier capacity to be ideal as a material for the ink tank container but is difficult to use for poor welding ability, can be certainly welded. Particularly, since P.P. material is low in material cost and has high transparency, the tank container formed of the PP material permits the user to visually check an ink remaining amount for convenience of use." So Omata et al. teaches that the ink holding member is made of polypropylene.
- 8. With respect to claim rejection of Nagashima et al. (734) in view of Shimada et al. Applicant argued on page 12 of the argument that "the Examiner's proposed combination is based on impermissible hindsight. That is the Examiner has merely chosen Shimada et al. for reciting polypropylene as well as general advantage for use of the polypropylene, rather than an advantage for use of polypropylene for storing the ink having a fluorescent coloring material. Applicant even argued that Shimada et al. doesn't teach or suggest that polypropylene would be suitable for use with an ink having a fluorescent coloring material." which is not persuasive. Nagashima et al. expressively

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discloses in column: 29, line: 15-25 that the ink holding member made of the polyurethane, cellulose, polyvinyl acetate, polyolefin or a polymer formed by condensation or polymerization reaction of organic compounds; and the ink of Nagashima et al. is a fluorescent ink. Nagashima et al. explicitly disclose that to hold the fluorescent ink, you can use any kind of polymer material. However, the new reference Shimada et al. explicitly teaches in column: 8, line: 40-45 that with the low vapor permeability of the polypropylene, ink can maintain their quality for an extended period of time, and Shimada et al. teaches that you can hold any kind of ink, they are not limited any particular ink. So one of the skilled artisans would know to modify the ink holding member of Nagashima et al. to Shimada et al. So it is obvious to modify the ink container of Nagashima et al. with polypropylene taught by Shimada et al. reference.

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9. Applicant's argument about combination based on impermissible hindsight, which is not persuasive. The primary reference (734) didn't discloses any particular advantages or disadvantage not to use polypropylene ink holding member to hold the fluorescent ink. However they expressively discloses in column: 29, line: 15-25 that the ink holding member made of a polymer formed by condensation or polymerization reaction of organic compounds to hold the fluorescent ink. Therefore Examiner use the secondary reference Shimada et al, which is explicitly teaches in column: 8, line: 40-45 that with the low vapor permeability of the polypropylene, ink can maintain their quality for an extended period of time, which could be any kind of ink. However applicant in his own specification also didn't disclose any particular reasoning to use the polypropylene

polymer for holding fluorescent ink. So one of the skilled artisans would know to modify the ink holding member of Nagashima et al. to Shimada et al.

### Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

> Manish S. Shah **Primary Examiner** Art Unit 2853

3/24/06